

Stoddard, Jamey

From: Stoddard, Jamey
Sent: Tuesday, June 18, 2013 8:22 AM
To: Heather Kendall-Miller; Brna, Phil; Lori Verbrugge
Subject: RE: FW: peer review USFW people

Hi all-

My apologies for not following up on this before I left for vacation...I am back in the office now and will try and reach out to everyone in the next day so when I am finished digging out of my inbox. Thanks.

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From: Heather Kendall-Miller [mailto:kendall@narf.org]
Sent: Wednesday, June 05, 2013 1:08 PM
To: Brna, Phil; Stoddard, Jamey; Lori Verbrugge
Subject: RE: FW: peer review USFW people

When can we discuss?

From: Brna, Phil [mailto:phil_brna@fws.gov]
Sent: Wednesday, May 29, 2013 7:36 AM
To: Jamey Stoddard; Heather Kendall-Miller; Lori Verbrugge
Subject: Fwd: FW: peer review USFW people

Lets discuss please.

Phil Brna
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From: **bob prucha** <prucha@integratedhydro.com>

Date: Tue, May 28, 2013 at 8:10 PM
Subject: FW: peer review USFW people
To: Phil_Brna@fws.gov
Cc: Wendy Loya <wendy_loya@twc.org>

Phil,

Apologies for the delay getting you some contacts. Here are some thoughts:

Need to have someone who:

- a) knows modflow, or modflow-surfact code well
- b) knows mining hydrology
- c) knows snow hydrology
- d) can it be a technical writer?
- e) someone who knows about characterization/conceptualization and modeling.
- f) ideally someone who teaches groundwater characterization/modeling, or who is a senior consultant/peer reviewer

Potential Issues:

- a) anyone who reads technical comments will have to also read the mine water plan and modeling report. This will be no small feat and not inexpensive.
- b) I'm not sure there is anyone who fits all the above needs best – but the closest would be those consultants who do this full time. They would not be available for obvious reasons.

Options:

- 1) The Modflow2013 conference in Golden, CO is next week. I'll be attending, along with Maria Loinaz, who did the stream temperature modeling. This is a conference where everyone who uses Modflow, or any deviant on it typically attends. I can certainly ask around to see if anyone there fits the needs outlined above. Can you wait this long? <http://igwmc.mines.edu/modflow2013.html>. I think there are some good people here (i.e., Charles Andrews from SSPA, or even Stefan Finsterle, Lawrence Berkeley National Laboratory (USDOE)). Stefan Finsterle specializes in parameter estimation/uncertainty techniques, which may be particularly useful in this review – the Arcadis GW modelers don't address significant uncertainty. Stefan is well published and could shed new light on how uncertain their estimates are. Charles Andrews

has a list of litigations longer than most books – mostly about GW modeling and associated issues. I believe he is also pretty well published.

- 2) Jim Mercer (knows modflow, former USGS, peer reviewed mshe before) – he is president of GeoTrans and has peer-reviewed two-years of USDOE MSHE modeling. He'd be an excellent choice, but not inexpensive and maybe limited on time. <http://www.geotransinc.com/013.html>
- 3) Peter Mock - knows modflow well <http://www.pmgc.us/>, but I'm not sure about his mining experience, northern latitude experience and anything beyond GW modeling (i.e., integrated stuff). I don't know him personally, but I've heard of him.
- 4) Mary Hill - USGS, well known <http://profile.usgs.gov/mchill>. She's very well qualified to assess the overall performance of the modeling, but again not sure about northern latitudes, mining hydro – but she is well published, and an acknowledged leader in proper use and development of GW models, especially Modflow.
- 5) Eileen Poeter, Professor – Colorado School of Mines. <http://inside.mines.edu/~epoeter/> Well published professors of GW modeling provide very credible reviews.
- 6) My partner in Integrated Hydro Systems is Prof. Tissa Illangasekare (<http://cesep.mines.edu/people/tissa.htm>) – he has an extensive number of publications and has taught GW and SW modeling for 30+ years. He has an excellent reputation – but this may be too close to home, though he could be contracted directly. The obvious advantage is that I could work with him to understand/prepare comments. He doesn't really focus on mining hydrology but teaches modflow and has published technical papers on water flow through snow.
- 7) There are many good professors in northern latitudes in Canadian schools – are these an option?
- 8) BLM - <http://www.blm.gov/pgdata/etc/medialib/blm/nv/minerals/mining.Par.60011.File.dat/GroundwaterModeling.pdf> (Tom Olsen?). I don't know him, but it might be good.
- 9) I'm not sure if this guy is still around – but everyone references him (and his book) on how to develop GW models. He'd be a good person to prepare text/assess the overall methodology. <http://www.cas.umt.edu/geosciences//faculty/woessner/aWoessnerResume2009%20full2.pdf>
- 10) <http://www.dunnhydrogeo.com/home/resume/resume-t> (I've worked with this gentleman on a peer review of Florida MSHE models)
- 11) I can provide the 4 technical peer reviewers, paid by EPA, who peer-reviewed our MSHE work at Pebble. You may already have them – I'm sure EPA would recognize them and they are already familiar with the general setting.

Let me know what you think.

Bob

